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10/577,762	11/29/2006	Carlo Masseroni	2003P16290WOUS	6271
29177 7590 12/09/2008 BELI, BOYD & LLOYD, LLP P.O. BOX 1135 CHICAGO, IL 60690				
EXAMINER				
PILAPITTYA, NALIN B				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/577,762

Applicant(s)

MASSERONI ET AL.

Examiner

NALIN PILAPITIYA

Art Unit

4154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. **Claim 14** objected to because of the following informalities: the second inter-protocol should be deleted where it states, "receiving the second inter-protocol inter-protocol message." Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 9, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cain (Pub. No.: US 2003/0179756 A1) in view of Yamashita (Patent No.: US 6,233,224 B1) and Parkvall (Patent No.: US 6,542,736 B1).

Re claim 9, Cain discloses a method for a wireless subscriber signaling by a wireless subscriber in a wireless network according to an open communication model, comprising:

providing a protocol stack to interface with a provider, the protocol stack including hierarchical layers for supporting a playback of streaming services provided by the provider, the layers from top-down include application, transport, data link, physical (paragraph 58 and 48; Paragraph 58 mentions the use of a data link layer and a physical layer thus suggesting the use of the osi model, which consists of application, transport, data link, and physical);

transmitting a default receiver report of a real-time protocol to the provider, the default report including a measurement value of a parameter indicative of the Quality of Service (QoS) of the subscriber (paragraph 17; the usage of the communication link by the provider is based on the quality of service that is determined by the receiver and alerted to the provider);

detecting via real-time protocol based on the measurement parameter if the QoS at the subscriber level has degraded to an attention level (paragraph 17);

detecting via the upgraded report if the QoS at the subscriber side is above a threshold, wherein the threshold is greater than the attention level (paragraph 17); and

Cain fails to disclose sending from the data link layer a command to the transport layer to switch from sending the default report to sending an upgraded receiver report when the QoS has degraded to the attention level;

transmitting the upgraded report at a rate faster than the default report.

sending from the data link layer a command to the transport layer to switch from sending an upgraded report to a default report when the QoS is above the threshold.

However, Yamashita discloses sending from the data link layer a command to the transport layer to switch from sending the default report to sending an upgraded receiver report when the QoS has degraded to the

attention level (column 6, line 23 – 30; if the buffer in the data link layer overflows, the quality deteriorates);

sending from the data link layer a command to the transport layer to switch from sending an upgraded report to a default report when the QoS is above the threshold (column 6, line 23 – 30; if there is room in the buffer for incoming data the quality will be above the threshold).

Yamashita fails to disclose transmitting the upgraded report at a rate faster than the default report.

However, Parkvall discloses transmitting the upgraded report at a rate faster than the default report (column 4, lines 1 – 15).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of “Cain in view of Yamashita and Parkvall” as a whole to produce the invention as claimed with a reasonable expectation of transferring commands and sending urgent quality level warnings at a faster rate for the benefit of initiating commands and saving energy by prioritizing more urgent messages to be sent at a faster rate.

Re claim 10, Cain in combination with Yamashita and Parkvall disclose the method according to claim 9, and Parkvall further discloses wherein the faster rate is equal to a measurement reporting rate from the physical layer (column 4, lines 1 – 15; the measurement reporting rate from the physical layer is interpreted to mean how quickly the measure is reported from the physical layer.

The prior art discloses that the faster rate is the maximum rate at which the report can be sent).

Re claim 12, Cain in combination with Yamashita and Parkvall disclose the method according to claim 9, and Cain further discloses wherein the upgraded report includes an actual value of an available service bandwidth at the subscriber side (paragraph 10).

Re claim 15, Cain in combination with Yamashita and Parkvall discloses the method according to claim 9, and Cain further discloses further comprising:

Detecting via the upgraded report a condition for triggering a cell reselection procedure occurs when the detecting the QoS is not further verified due to a QoS worsening under the attention level (paragraph 17);

Suspending the sending of the upgraded report and entering a handshake phase for selecting a new serving cell (paragraph 17);

and Yamashita further discloses sending from the data link layer a command to the transport layer to switch from sending an upgraded report to a default report (column 6, line 23 – 30).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cain (Pub. No.: US 2003/0179756 A1) in view of Yamashita (Patent No.: US 6,233,224 B1) and Parkvall (Patent No.: US 6,542,736 B1) as applied to claim 9 above, and further in view of Cain (Pub. No.: US 2005/0053003 A1).

Re claim 11, Cain in combination with Yamashita and Parkvall disclose the method according to claim 9, but fail to disclose wherein the detecting if the QoS has degraded to the attention level and the detecting if the QoS is above the threshold are at the physical layer.

However, Cain '003 discloses wherein the detecting if the QoS has degraded to the attention level and the detecting if the QoS is above the threshold are at the physical layer (paragraph 17).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of "Cain in combination with Yamashita and Parkvall " and "Cain" as a whole to produce the invention as claimed with a reasonable expectation of achieving QoS level detection at the physical layer for the benefit of saving higher OSI levels for other operations.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cain (Pub. No.: US 2003/0179756 A1) in view of Yamashita (Patent No.: US 6,233,224 B1) and Parkvall (Patent No.: US 6,542,736 B1) as applied to claim 9 above, and further in view of Gardner (Patent No.: US 6,327,275 B1).

Re claim 13, Cain in combination with Yamashita and Parkvall disclose the method according to claim 12, but fail to disclose wherein the upgraded report includes a actual filling in level of a delay compensating buffer managed at

the application layer at the subscriber side for accommodating incoming data and a play-backing streaming service.

However, Gardner discloses wherein the upgraded report includes a actual filling in level of a delay compensating buffer managed at the application layer at the subscriber side for accommodating incoming data and a play-backing streaming service (column 5, line 39 – 50 and column 3 line 52 – 54).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of "Cain in combination with Yamashita and Parkvall" and "Gardner" as a whole to produce the invention as claimed with a reasonable expectation of achieving a buffer level report for the benefit of monitoring the buffer level in order to save data from being discarded if the buffer is full.

6. Claim14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cain (Pub. No.: US 2003/0179756 A1) in view of Yamashita (Patent No.: US 6,233,224 B1), Parkvall (Patent No.: US 6,542,736 B1), and Gardner (Patent No.: US 6,327,275 B1) as applied to claim 13 above, and further in view of Kahveci (Patent No.: US 6,973,037 B1) in view of Higgins (Patent No.: 5,898,841).

Re claim 14, Kahveci discloses the method according to claim 13, further comprising: at the data link layer:

receiving a measurement reporting request (column 4, line 28 – 41);

sending a first inter-protocol message including the actual value to the transport layer (column 4, line 28 – 41); but fails to disclose at the transport layer:

receiving the first inter-protocol message;
sending a second inter-protocol message requesting a state of an application buffer to the application layer;

at the application layer:

receiving the second inter-protocol inter-protocol message;
sending a third inter-protocol message including the actual value of the buffer level to the transport layer; and

creating at the transport layer the upgraded report by including all the information in the default report and the information provided in the first and third inter-protocol messages.

However, Higgins discloses at the transport layer:

receiving the first inter-protocol message (column 7, line 6);
sending a second inter-protocol message requesting a state of an application buffer to the application layer (column 7, line 9 – 16; As shown in figure 3, the end-points are located in the application layer and therefore the state or details of the application buffer are accessed in the application layer);

at the application layer:

receiving the second inter-protocol inter-protocol message (column 7, line 9 – 16);

sending a third inter-protocol message including the actual value of the buffer level to the transport layer (column 7, line 6 – 16; the buffer size required is sent by the link layer to the transport layer, which access the application layer to allocate the buffer and return the details of the buffer, including the buffer size or level); and creating at the transport layer the upgraded report by including all the information in the default report and the information provided in the first and third inter-protocol messages (column 7, line 9 – 16; the details are assembled in the transport layer).

Motivation to combine may be gleaned from the prior art contemplated.

Therefore, one skilled in the art would have found it obvious from the combined teachings of “Cain in combination with Yamashita, Parkvall, and Gardner” and “Kahveci in view of Higgins” as a whole to produce the invention as claimed with a reasonable expectation of producing an information report via command transmissions between the data link layer, transport layer, and the application layer for the benefit of relaying that information back to the base station in order to assess the current status of the received information and improve the quality of service.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cain (Pub. No.: US 2003/0179756 A1) in combination with Yamashita (Patent No.: US 6,233,224 B1) and Parkvall (Patent No.: US 6,542,736 B1) as applied to claim 9 above, and further in view of Bowman-Amuah (Patent No.: US 6,427,132 B1).

Re claim 16, Cain in combination with Yamashita and Parkvall disclose the method according to claim 9, but fail to disclose wherein the wireless network is connected to the internet network, and wherein the streaming services are received via the internet network.

However, Bowman-Amuah discloses the method according to claim 9, but fail to disclose wherein the wireless network is connected to the internet network, and wherein the streaming services are received via the internet network (column 2, line 35 - 43).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of "Cain in combination with Yamashita and Parkvall" and "Bowman-Amuah" as a whole to produce the invention as claimed with a reasonable expectation of using the internet for streaming services for the benefit of accessing video in real time without having to wait for a download.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NALIN PILAPITIYA whose telephone number is (571)270-7122. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571)272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NALIN PILAPITIYA/
Examiner, Art Unit 4154

/Vu Le/
Supervisory Patent Examiner, Art Unit 4154